Title (en)
   HIGH DYNAMIC RANGE PIXEL

Title (de)
   PIXEL MIT HOHEM DYNAMISCHEM BEREICH

Title (fr)
   PIXEL À GRANDE GAMME DYNAMIQUE

Publication
   EP 2504993 B1 20160127 (EN)

Application
   EP 10798369 A 20101122

Priority
   • GB 0920750 A 20091126
   • GB 2010002153 W 20101122

Abstract (en)
   [origin: WO2011064532A1] A high dynamic range pixel (2) includes a photosensor device (4) for detecting incident light, said photosensor having a photosensor output (14) for a photosensor signal Vp that represents a time integral of the detected light intensity over an integration period. A transistor disconnect switch (8) has a first switch input (15) that is connected to the photosensor output (14), a second switch input (17) that is connected to receive a time- dependent reference signal Vref, and a switch output (16) for a switch output signal Vs that is switchably connected to the first switch input. The disconnect switch (8) is constructed and arranged to disconnect the switch output (16) from the first switch input (15) at a capture moment that depends on the relative values of input signals at the first and second switch inputs (15,18). A readout circuit (10) is connected to the switch output (16) and arranged to capture the switch output signal Vs at the capture moment and provide an output signal Vout that is related to the switch output signal Vs. The first switch input (15) is connected additionally to an input (29) for a time-dependent applied signal Vapp, such that the input signal at the first switch input (15) is the sum of the photosensor signal Vp and the applied signal Vapp.

IPC 8 full level
   H04N 5/353 (2011.01); **H04N 5/355** (2011.01); **H04N 5/3745** (2011.01)

CPC (source: EP US)
   H04N 25/533 (2023.01 - US); **H04N 25/571** (2023.01 - EP US); **H04N 25/583** (2023.01 - EP US); **H04N 25/77** (2023.01 - EP);
   H04N 25/771 (2023.01 - EP US)

Designated contracting state (EPC)
   AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
   WO 2011064532 A1 20110603; EP 2504993 A1 20121003; EP 2504993 B1 20160127; GB 0920750 D0 20100113; GB 0922061 D0 20100203;
   US 2012280112 A1 20121108; US 9191588 B2 20151117

DOCDB simple family (application)
   GB 2010002153 W 20101122; EP 10798369 A 20101122; GB 0920750 A 20091126; GB 0922061 A 20091217; US 201013510123 A 20101122